smop
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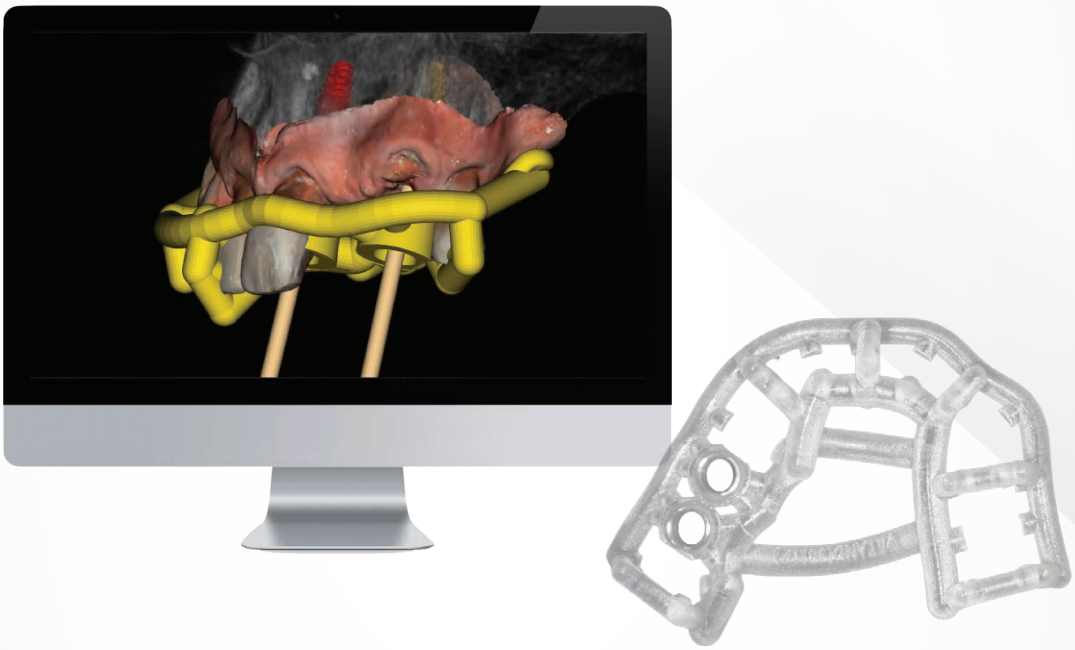
IMPLANT GUIDED SURGERY SOLUTION

Better Implant Placement. Easier Restoration Design

Discover the Solution That Simplifies Implant Surgery From Start to Finish



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Carestream DENTAL
Preferred Partner

About SMOP-Swissmeda

Swissmeda was founded in 2009 by a team of experts to deliver a fully digital workflow through 3D implant planning, guided surgery and software development. Its patented guide design technology has no equivalent and makes seating the template easier, improves visibility for the surgeon and decreases the time and cost of design and execution. Swissmeda lets users acquire patient data, plan the implant placement and then export data into third-party software for surgical guide creation in just a few simple steps.

Additionally, Swissmeda created the first cloud system for uploading vital 3D patient data needed for treatment planning, such as CBCT volumes and intraoral impression data. The whole team can access 3D patient data from anywhere and can easily share it between different players involved with treatment planning, either team members in the practice or experienced service partners. This improves treatment efficiency, ensures optimal results and enhances communication and collaboration with others.

The company is based in Switzerland and has users in 27 countries.

Who is SMOP for?

- Dental professionals who want to enhance treatment, reduce risk and adverse events, improve communication with their team and patients, reduce time spent per case and decrease treatment costs
- Dental labs interested in offering services to dental professionals, providing treatment planning consultancy, designing surgical guides, manufacturing drilling templates or designing and manufacturing of prosthetic restorations
- Printing centers interested in printing surgical guides
- Implant companies interested in offering services to dental professionals such as treatment planning consultancy, designing surgical guides, manufacturing drilling templates or designing and manufacturing prosthetic restorations
- Dental service organizations and group practices interested in improving their workflow, reducing costs and creating consistency across treatment

Why Should Dental Professionals Choose SMOP?

- Intuitive and easy to use methodology to view CBCT and scan data and to navigate and plan implants
- It offers special surgical guide design with the highest precision and visibility
- Its integrated cloud solution allows you to easily share data with all players without redundancies, making it easier to integrate your own team and outside experts into the planning process
- Its open system lets you work with your choice of CBCT system, intraoral scanner, implant and abutment manufacturers

Main reasons to go into guided surgery

- Gain better insight into individual patient cases and choose the optimal option for them
- Eliminate surprises and reduce surgery time with 3D views of the patient's anatomy
- Reduce risks of misplacement with pre-designed guide, keeping patients safer and reducing stress for the surgeon

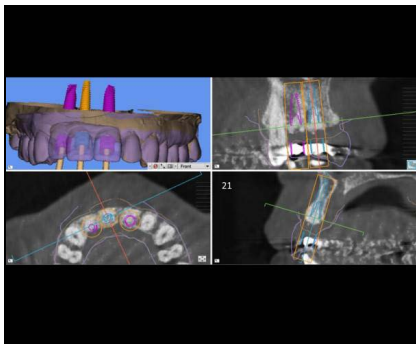
A SAFER AND ACCURATE WORKFLOW

Step 1: Aquire Data

DATA REQUIRED FOR DIGITAL IMPLANT PLANNING

CBCT/CT scan data
The DICOM (.dcm) file should have clear visibility of the tooth surfaces and soft tissue and the least amount of movement artifact and scatter (noise) possible. This is achieved by removing unnecessary metal or markers prior to the scan.

The file should not have radiopaque or radio-translucid stents or any other external device.



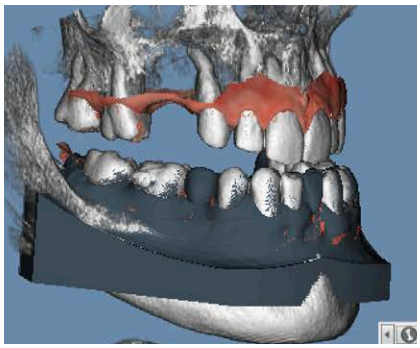
Intraoral scan or extraoral scan
A digital impression should be obtained by:

- Using an intraoral scanner, or
- Scanning a model/impression

Data must be in the format of an STL or PLY.

Prosthetic target information – optional but recommended
A digital wax-up should be made using third-party software. It can also be created by using a table scanner to scan a traditional model.

Data must be in the format of an STL or PLY file.



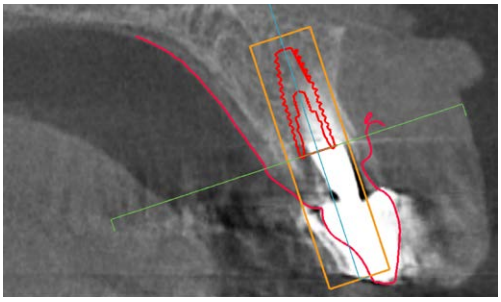
Send data to your smop service partner and order planning service
Depending on the smop license: The clinician can use the web-upload service on mysmop.com to send the acquired data and create an order or the clinician can enter the data directly to smop and use the built-in ordering tool to choose the desired services:

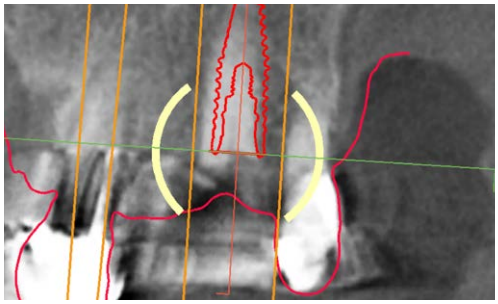
- Matching model and volume data
- Proposal for Implant planning
- Surgical guide design
- Printing

Step 2: 3D Surgical Guide Design

IMPLANT PLANNING AND 3D DESIGN SERVICE

The SMOP Service Partner creates a proposal for the implant planning (if requested) and template design. The case then is submitted back to the clinician for final approval via a user-friendly, built-in communications tool—facilitating a fast and accurate workflow and preventing miscommunication.





Why Has Dentistry Resisted the Widespread Adoption of Computer-Assisted Implant Surgery?

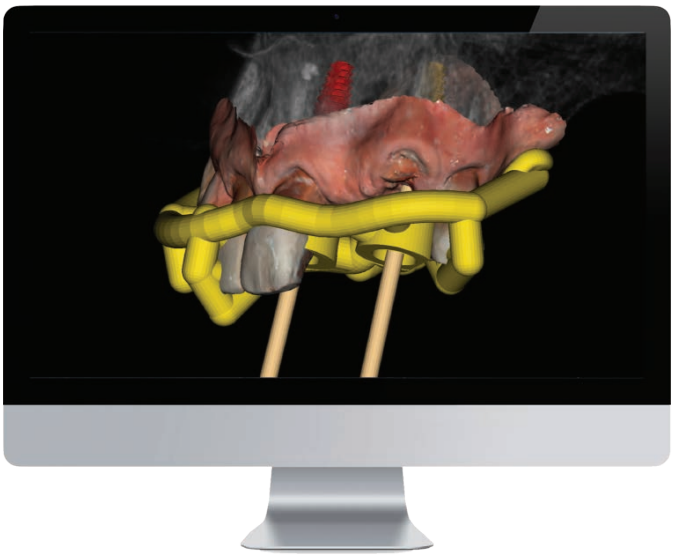
"In my observation over 24 years of practice, the adoption of technology typically goes through three stages: (1) skepticism (theoretical state); (2) acceptance as truth but largely deemed unnecessary and is marginalized (metaphysical state); (3) finally, acceptance as truth and considered transformational (positivistic state). Often, the earliest and harshest critics come to embrace the technology and may even claim to be experts in its use."

-Dr. Mandelaris

Step 3: Design Approval

- Receive an email to review and approve the planning and surgical guide design
- Open SMOP and inspect the planning and surgical guide design done by your service partner
- Optimize implant positions and approve the planning by one click

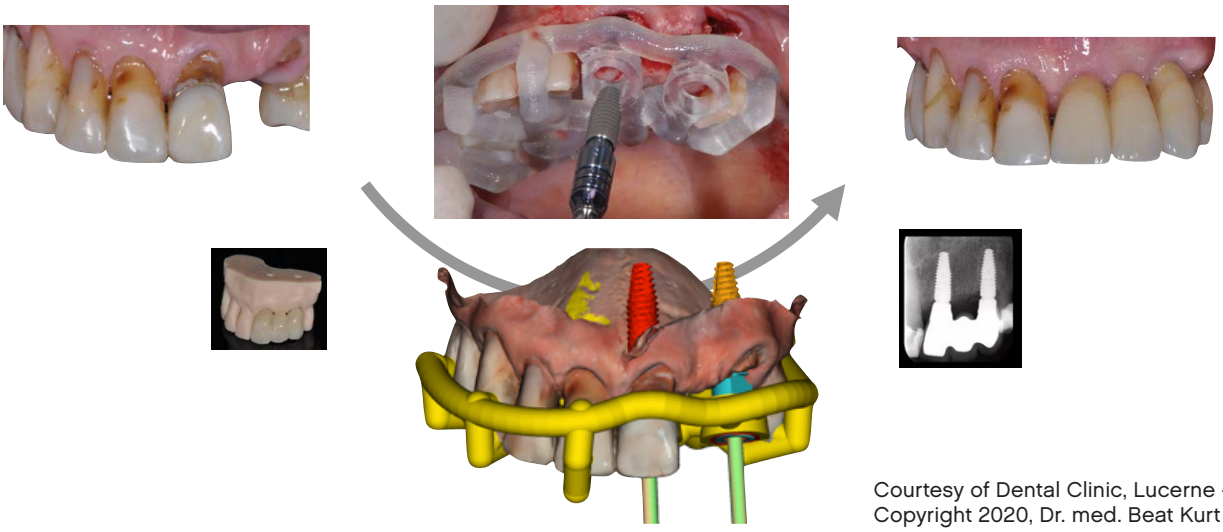
Your service partner is informed automatically.



Supported Treatments and Indications

PARTIALLY EDENTULOUS

IMMEDIATE LOADING WITH FULL DIGITAL WORKFLOW



Courtesy of Dental Clinic, Lucerne - Copyright 2020, Dr. med. Beat Kurt

Cloud Solution

An intuitive and secure cloud imaging solution that gives you access to your clinical data anytime, anywhere.

- Enjoy the **freedom to access and share your data** from any location at any time: With one-click, your treatment plans and 3D CBCT or intraoral scans can be shared 24/7 with colleagues and other health professionals for enhanced collaboration.
- Share your case from any operating system (Windows or Mac) mobile app for iOS and iPad whenever you want
- Decide who can access your cases and when; cancel access at any time.
- Patient Data Protection: All partners will either see or get access to patient names
- Ensure you always work and share the latest patient data files and information with powerful synchronization procedures
- Enjoy **peace of mind knowing your data is secure**: Protect your data and preserve your privacy thanks to a reinforced offsite security.

Your data and communications are protected through encryption. Data can be stored, shared and accessed within a few clicks, preserving integrity, security and privacy.

Medical regulations around data storage and data protection are fulfilled automatically:

- Patient data will be stored securely for at least 10 years without any additional action from the practitioner and available as long as the subscription is kept active. If the subscription is not active anymore, data will be provided on request
- Patient data is encrypted, data transportation from a local computer to the server follows the latest standards and technologies
- Enjoy **an intuitive application for an easy workflow**: The Imaging & Case Collaboration tool offers multiple advantages to facilitate your review and improve your workflow and collaboration in the easiest way possible.
- Optimized for ease-of-use, reducing clicks to a minimum
- 24/7 access from any computer connected to the Internet
- Automated data synchronization with the Cloud when editing, adding or removing data to a case
- Optimized storage management to quickly reopen each case
- Standard data formats supported (DICOM, STL and JPG) to integrate easily with most major dental equipment manufacturers and practice management software
- Accessible patient data in one single place
- Intraoral scans, CBCT data and additional STL data and images can be view or hidden with a simple click
- Marker points tool available within the 3D data to comment on any abnormality

Clinical Studies

- **Clinical Implant Dentistry and Related Research 2015. E-pub ahead of print**
  "Accuracy of 3D Printed Templates for Guided Implant Based on Matching a Surface Scan with CBCT"
  Kernen M, Benic G, Payer M, Schär A, Müller-Gerbi M, Fillipi A, Kühl S

- **Clin Oral Implants Res. 2009 Sept;20 Suppl4:73-86doi:10.1111/j.1600-0501.2009.01788.x**
  "A systematic review on the accuracy and the clinical outcome of computer-guided template-based implant dentistry."
  Schneider D. Marquardt P. Zwahlen M. Jung RE

- **Swiss Dent J. 2014;124(3):305-23**
  "Template guided surgery with the open-access software "smop"."
  Kurt BR

- **Clin Implant Dent Relat Res. 2018 Aug;20(4):541- 549.doi: 10.1111/cid.12614. Epub 2018 Apr 25**
  "Accuracy of the match between cone beam computed tomography and m odel scan data in template-guided implant planning: A prospective controlled clinical study."
  Schnuteenhaus S, Groller S, Luthardt RG, Rudoph H

- **Oral Surg Oral Med Oral Pathol Oral Radiol. 2016 Apr; 121(4):e72-9. doc:10.1016/j ooo.2015.12.012. Epub 2016 Jan 4**
  "Retrospective study to determine the accuracy of template-guided implant placement using a novel nonradiologic evaluation met hod."
  Schnutenhaus S, Edelmann C, Rudolph H, Luthardt RG

- **Clin Oral Investig. 2018 Jul:22(6):2363-2372.doi: 10.1007/s00784-018-2339-8. Epub 2018 Jan 22**
  "3D accuracy of implant positions in template-guided implant placement as a function of the remaining teeth and the surgical procedure: a retrospective study."
  Schnutenhaus S, Edelmann C, Rudolph H, Dreyhaupt J, Luthardt RG

- **Int J Comput Dent. 2018;21(2):97-105**
  "Precision of sleeveless 3D drill guides for insertion of one-piece ceramic implants: a prospective clinical trial"
  Schnutenahus S, von Koenigsmarck V, Blender S, Ambrosius L, Luthardt RG, Rudolph H

- **Int J Environ Res Public Health. 2018 Oct 25:15(11), pic E2361. doi: 10.3390/ijerph15112361**
  "Full in-Office Guided Surgery with Open Selective Tooth-Supported Templates: A Prospective Clinical Study on 20 Patients."
  Mangano FG, Hauschild U, Admakin O

- **Clin Oral Implants Res. 2015 Mar;26(3):320-5.doi:10.1111/clr.12327. Epub 2014 Jan 18**
  "In-vitro evaluation of the tolerance of surgical instruments in templates for computer-assisted guided implantology produced by 3D printing."
  Schneider D, Schober F, Grohmann P, Hammerle CH, Jung RE

- **In production**
  "Efficiency of conventional and computer-assisted, template guided implant planning and placement - a randomized controlled clinical trial."
  Schneider D, Sancho M, Schober F, Jung RE, Mühlemann S, Benic G, Hämmerle CHF

Testimonials

Terry Fohey, Athens, Georgia, USA
Since becoming a SwissMeda, guided surgery center, my clients and patients are receiving more accurate and cost-effective implant dentistry. Our surgeons love the guides.

-Terry Fohey, CEO NuCraft Dental Arts, Athens, Georgia, USA - September 2014

Stanley D. Satterfield, Athens, Georgia, USA
Swissmeda CBCT Implant Guided Surgery
We have been using the SwissMeda (SMOP) CBCT guided implant surgery system since May 2013 and have used over 120 guides for single and multiple implant cases.

We are now placing essentially all dental implants (delayed and immediate) with 3D surgical guides for predictable outcomes surgically and prosthetically. These guides know where the sinus, nerve, roots, bone soft tissue is, and where the future crown will be. Therefore, you will minimize complications for your patients. This is an invaluable asset for performing dental implant surgery.

We know this system will provide our patients with the best possible results and improve prosthetic and surgical planning among dentist, technicians and the implant surgeon.

If your serious about providing state of the art 3D guided implant surgery, this is a system you should strongly consider.

-Stanley D. Satterfield, DMD - November 2014

Prof. Dr. Dr. Rolf Ewers, Vienna
One of my research interests is navigated surgery. The Smop planning system from Swissmeda is the answer we have been waiting for so long.

Implant planning and the use of drilling templates is no longer reserved just for specialists.

The system is so simple and logical that I have to recommend it for anyone who places implants.

-Prof. Dr. Dr. Rolf Ewers, C.M.F. Institut Ges.m.b.H., Vienna

Dr. Ayham Arab Oghli, Riad
First I want to thank your corporation. I inserted the implant in three patients using your surgical guide. It fits easily in the mouth and gives an excellent result.

For one patient I used the template in the lab first to make two temporary crowns and they were nicely fitted to the implant in the patient mouth.

- Dr. med. dent. Ayham Arab Oghli, Lasting Smile Dental Clinics, Riad, Saudi Arabia

Implant Library

General overview of implant systems available in Smop 2.17 version					
Implant manufacturer	Sleeves		Abutments		Scanbody
	Fully guided	Pilot		Anchor pin	
Alpha-Bio Tec	✓	✓	✓	✓	-
Anthogyr	-	✓	✓	✓	-
B&B Dental	✓	✓	✓	✓	-
BIOMET 3i	✓	✓	✓	-	-
BIOTECH INT.	✓	✓	-	-	-
BTI	✓	✓	-	-	-
BTK	✓	✓	✓	✓	✓
Bego	✓	✓	-	-	-
Bicon	✓	✓	✓	-	✓
BioHorizons	✓	✓	✓	✓	-
Biodenta	✓	✓	-	-	-
Bredent Medical	✓	✓	✓	-	✓
C-TECH	✓	✓	-	-	-
CAMLOG	✓	✓	✓	-	✓
DENTSPLY	✓	✓	-	-	✓
DIO	✓	✓	-	-	-
Demo	✓	✓	-	-	-
Dentaurum	✓	✓	✓	-	✓
Dentium	✓	✓	✓	✓	✓
FairImplant	✓	✓	-	-	-
Futur Implant	✓	✓	✓	-	-
GC Tech	✓	✓	✓	-	-
Global ID	✓	✓	-	-	-
JDental	✓	✓	-	-	-
Keystone Dental	✓	✓	✓	-	-
Lasak	✓	✓	✓	-	✓

General overview of implant systems available in Smop 2.17 version					
Implant manufacturer	Sleeves		Abutments		Scanbody
	Fully guided	Pilot		Anchor pin	
Leone	✓	✓	✓	-	✓
MIS	✓	✓	✓	-	✓
Medentika	✓	✓	-	-	✓
Medentis	✓	✓	-	-	-
Medical Instinct	✓	✓	✓	-	-
Megagen	✓	✓	-	-	-
Neodent	✓	✓	-	✓	-
Neoss	✓	✓	-	-	-
Nobel Biocare	✓	✓	-	-	✓
Osstem	✓	✓	✓	✓	✓
Osteo-ti	✓	✓	-	-	-
Paris	✓	✓	-	-	-
SDS	✓	✓	✓	-	-
SIC	✓	✓	✓	-	✓
Southern Implants	✓	✓	✓	-	-
Steco	✓	✓	-	-	-
Straumann	✓	✓	-	✓	✓
Study Implants	✓	✓	-	-	-
Sweden & Martina	✓	✓	-	-	-
TAG Dental	✓	✓	✓	✓	✓
TBR	✓	✓	-	✓	-
TRATE AG	✓	✓	✓	-	✓
TRI	✓	✓	-	-	
Thommen Medical	✓	✓	✓	-	✓
VITA	✓	✓	-	-	
Zimmer	✓	✓	✓	-	✓

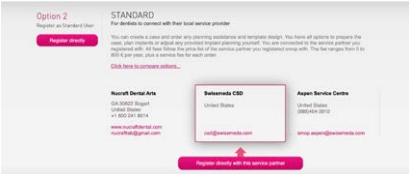
Registration Process

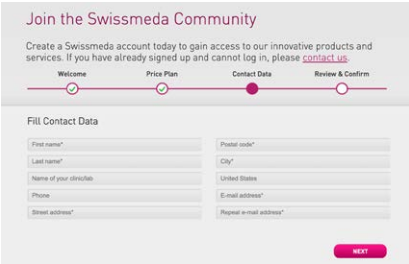
Clinicians can sign up to use SMOP at this link:
http://mysmop.com/registration_form

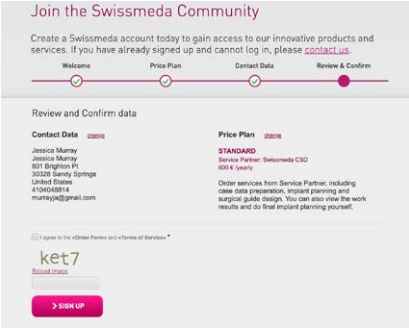
After logging in, the clinician has access to:

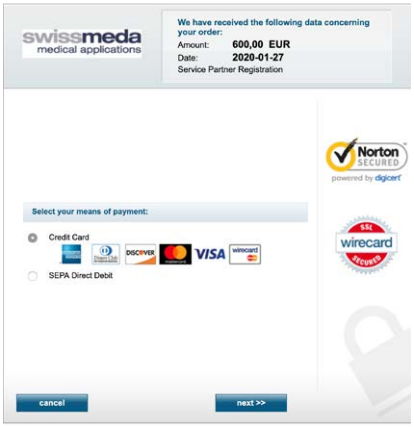
- Installation files for Windows and Mac
- IOS App where cases can be visualized on the go
- Manuals
- Contract and agreements

Scientific research and tutorials
Tutorials and scientific research are available on the website to help clinicians provide the best treatment for their patients.









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